ICAM2024

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ASTM INTERNATIONAL CONFERENCE ON ADVANCED MANUFACTURING

Research to Application through Standardization

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Industrial Sector: Construction on Earth and Beyond

Additive manufacturing (AM) in construction has made headlines across many media outlets, both AM-specific and mainstream. The technology is expected to help improve the efficiency of the industry by reducing labor, costs, and construction lead time, as well as increasing workplace safety. Hence, some government and commercial industry entities are investing resources into research and development in this area to accelerate its growth and adoption.

Besides revolutionizing how structures are built on Earth, AM is also seen as an ideal technology to realize construction on other planetary bodies like the Moon and Mars. This symposium aims to explore the current state-of-the-art development of AM techniques for construction across, and outside of, the globe. Additionally, it will also focus on the current and future possibilities of the technology in this industry.

Topics of interest include but are not limited to:

- New materials development for additive manufacturing in construction on Earth as well as planetary surfaces
- Development of new test methods, or leveraging of existing methods, to demonstrate building code compliance of AM in construction
- Types of AM technologies (hardware and software) applicable for deployment in both prefabricated and on-site construction environments
- Digital Inventories
- Innovative/complex architecture and the use of parametric and generative design
- Improved sustainability for AM in construction and circular economy (material waste)
- AM in construction beyond Earth (materials & technologies)

Symposium Organizers

- **Michael Fiske,** NASA-JSEG, USA
- **Ali Kazemian,** Louisiana State University, USA
- **Eric L. Kreiger,** U.S. Army Engineer Research and Development Center (ERDC), USA
- **Vittoria Laghi,** University of Bologna, Italy
- **Timothy Wangler**, ETH Zürich, Switzerland

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ADDITIVE MANUFACTURING